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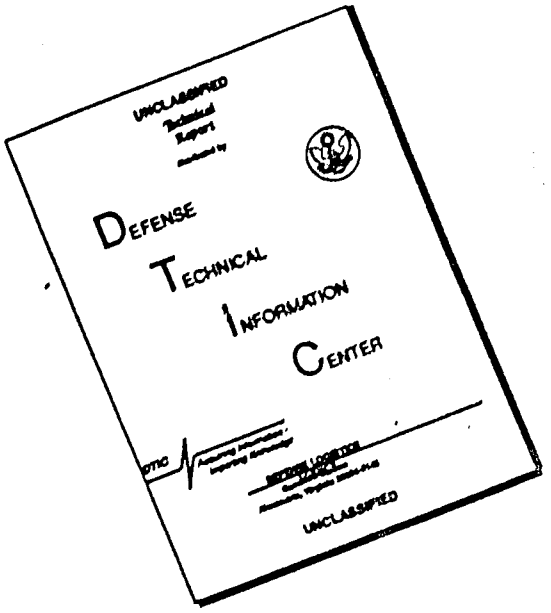

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO
AGAM-P (M)(1 May 68) FOR OT RD 681133 3 May 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 36th Engineer Battalion, Period Ending 31 January 1968 (U)

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BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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3

DEPARTMENT OF THE ARMY
Headquarters 36th Engineer Battalion
APO San Francisco 96291

EGFE-OP 13 February 1968

SUBJECT: Operational Report - Lessons Learned (RCS CSFOR - 65)
for Quarterly Period Ending 31 January 1968

THRU: Commanding Officer
34th Engineer Group (Const)
APO 96291

Commanding General
20th Engineer Brigade
APO 96491

Commanding General
USA Engineer Command Vietnam (Prov)
ATTN: AVCC-P&O
APO 96491

Commanding General
United States Army Vietnam
ATTN: AVHGC-OH
APO 96307

Commander-in-Chief
United States Army, Pacific
ATTN: GPOP-OT
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T O: Assistant Chief of Staff for Force Development
Department of the Army (ACSFOR DA)
Washington, DC 20310

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681133

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SECTION 1, PART 1 - Significant Organization or Unit Activities

1. COMMAND: No significant changes have occured in the command structure of the battalion, except, for a change of company commandes in B Company which occured on 22 January 1968, and, a change in the battalion S-3 position which occured on 26 November 1967. The battalion continues under the command of LTC Thomas C. Hunter who accompanied the unit to Vietnam in September.

2. PERSONNEL: During the reporting period the following units have been attached to the battalion:

67th Engineer Company (DT)
94th Engineer Det. (Quarry)
Quarry Section, 93d Engr Bn
Quarry Section, 591st Engr Co (LE)
Quarry Section, 595th Engr Co (LE)
156th Engr Det. (Well Drilling)

Battalion units lost a total of 188 military personnel through normal rotation, in-country transfers, and other routine personnel actions and received 18 replacements. The receipt of new filler personnel in the near future seems rather dim and a program for maximum cross-training is under way. The utilization of Local Nationals during the period has increased from a total of 168 employed to a total of 213, and is expected to double during the next quarter.

3. PLANS, OPERATIONS, AND TRAINING: During the reporting period, the battalion portion of the Vung Tau Sub Area defensive plan was revised, implemented and tested. Significant activities in the area of operations includo:

a. On 15 November 1967, A Co(-), 36th Engr Bn., moved to Gia Ray, RVN and assumed operational control of the Gia Ray Quarry. A base camp was constructed and approximately 200 men are presently on site. A Co. is supported by 94th Engr Det. (Quarry), the quarry detachments of the 591 and 595 Engr Co's, and a portion of the third echelon maintenance shop organic to A Company.

b. On 26 November 1967, B Co, 36th Engr Bn, moved a platoon sized task force to Ham Tan, RVN on a operational support mission to construct parking facilities for C-130 aircraft, rehabilitate one liaison aircraft runway, and to rehabilitate roads in the area. The move was effected by utilization of LCU water craft and required construction of an offshore ramp to enable discharged equipment to gain the shore.

c. On 3 Jan 68, C Co, 36th Engr Bn, moved a platoon sized task force to Phu Quoc Island, Southwest of the mainland, on an operational support mission to rehabilitate an existing pier, construct two LCU ramps and

a causeway, and to construct tropical housing for advisory personnel. Movement of the task force was accomplished thru the use of water transport. Project necessitated opening a blast rock quarry for fill material.

d. Between 26 Jan 68 and 31 Jan 68, D Co, 36th Engr Bn, began mobilization to move a platoon sized task force to Nui Dat, RVN, with a mission assignment of up-grading Luscombe airfield to a Type II C-130 capable strip. The movement of this force is to be accomplished by a convoy land movement.

e. On 9 January 1968, C Co, 36th Engr Bn, poured a continuous concrete pour for the first of three foundations for 50,000 bbl. POL tanks. The pour involved placing 550 cubic yards of concrete in a 21 hour period.

f. During the first week in January, the battalion conducted a four day training school in order to qualify local nationals in the operation of Euclid rock buggys for quarry operation. The course proved to be quite successful and frees military personnel for other duties which local nationals cannot perform.

g. The 544th Engr Co (CS), attached to the battalion completed the deprocessing and set-up of a 120 TPH asphalt plant in preparation for hot-mix asphalt production to re-surface the Vung Tau Army Airfield and to begin upgrading of National Route QL-15.

4. LOGISTICS AND MAINTENANCE:

a. During the reporting period the battalion has requested approximately 1,171,734 board feet of lumber, 19,601 bags of cement, 9,871 sheets of plywood, 20,000 sheets of corrugated roofing, 350,000 linear feet of concrete reinforcing steel, and 36,286 pounds of nails. Although some materials have been in short supply, most of the shortages have been in specialty items such as rolled steel sections, piling, etc.... No job has become critical due to lack of materials.

b. The battalion maintenance capability is supporting major construction projects from Phu Quoc Island, south of Cambodia to Ham Tan, RVN, south of Phan Thiet including all maintenance requirements in five operating quarries. At present, the battalion is maintaining 144 pieces of equipment in addition to its TOE equipment without any augmentation in maintenance personnel. Lack of repair parts for both TOE equipment and augmentation equipment (primarily old RMK equipment) continues to be a problem resulting in frecuent work stoppages in the quarries.

5. COMMAND MANAGEMENT: The continuing requirement to commit less than a full company on a directed construction project which combines such diversified operations as earthmoving, well-drilling, quarry operation, vertical construction and pile-driving points out the extreme flexibility and broad knowledge required by personnel at the platoon sergeant and platoon leader level. Projects are assigned in

order that all members in supervisory positions have the opportunity to become familiar with all phases of construction activities.

6. INSPECTOR GENERAL: The battalion received a follow-up Inspector General inspection on 5 and 6 January 1968. This inspection was a follow-up to that conducted in August 1967 prior to the unit's rotation. No rating was given and no formal report written. Existing deficiencies were pointed out and corrective action taken to eliminate them.

7. INFORMATION: A full time information section has been formed within the operations section under the auspices of the Construction Office. The section has one specialist utilized full time in handling Home Town News Releases as well as providing coverage on all construction projects.

8. CIVIC ACTION: The battalion has recently completed levelling and filling a large area for the ARVN airborne battalion stationed in Vung Tau which will be utilized for construction of a playground and school. Playground equipment was built and installed at the Cat Lo school by members of the operations section. The equipment was dedicated during the opening festivities of TET with the members of the section as guests. The battalion has recently received authorization to construct 1.8 miles of access road into a proposed site for construction of a new Chieu Hoi village. The road will provide access for the returnees who will be settled in the village to permit them to market goods and produce in Vung Tau and the surrounding vicinity. The road is part of a $30,000 project sponsored by CORDS.

Section I, Part II - Projects started and/or completed by this unit during the reporting period are:

1. PHU QUOC ADVISOR HOUSING: Consists of the design and construction of two standard tropicalized BEQ's, 20x68', one BOQ, 20'x56', shower and facilities, and MER burn-out latrines.

2. PHU QUOC PORT FACILITIES: Consists of the design and construction of a port road, cargo off-loading hardstand, two LST off-loading ramps constructed of concrete and a rock filled causeway.

3. PHU QUOC PIER REPAIR: Consists of the rehabilitation of an existing 400' pile supported pier to include the replacement of the edge bumper decking and treadway and the addition of fender piles and attached camels.

4. PHU QUOC DOLPHINS: Consists of designing and constructing four 16-pile wooden dolphins near the off-shore end of an existing pier to provide mooring facilities for supply barges and patrol boats.

5. HAM TAN CANTONMENT: Consists of design and construction of billets, mess-hall, shower and latrine facilities, motor maintenance shop and cantonment roads for an artillery battery. Approximately after the project was 25% complete, the artillery battery was re-located to a new fire base and the project terminated.

6. HAM TAN ARMY AVIATION LOGISTICS AREA: Consists of the design and construction of parking aprons and refueling accomodations for ten UH-1D and two CH-47 rotary wing aircraft.

7. HAM TAN AIRSTRIP REHABILITATION: Consists of the design and construction of a 190'x750' DBST parking apron for five C-130 aircraft at an existing airstrip, upgrading of an existing L-19 aircraft observation airstrip, upgrading and surfacing of 300 meter of access road, and patching of the existing C-130 airstrip.

8. FIREBASE BRAVO LAND CLEARING: Consists of the operational support of the required land clearing for a 40,000 square yard artillery fire base camp. During the berm construction the project was transferred to another engineer battalion.

9. CLASS II AND IV COVERED STORAGE: Consists of the design and construction of one 40'x300' and one 80'x160' open storage warehouse at the Vung Tau Storage Depot. Building had concrete floors and corrugated metal roofs, and electrical lighting.

10. TACTICAL BRIDGE REPLACEMENT: Consists of the removal of an 80' long double-single Bailey Bridge and replacement of it with a temporary Class 50 timber-trestle bridge to be followed by installation of a two-way Class 50 MACV Standard Bridge 60' long.

11. GIA RAY CANTONMENT: Consisted of the design and construction of 1360 SF of maintenance shop, 3150 SF stabilized parking area, 6000 SF of EM billet structures, 12620 SF of WABTOC billets, 3654 SF of mess facilities, appropriate MER showers, and MER burn-out latrines.

12. VUNG TAU 905 MAN CANTONMENT: During this period 8145 SF of motor pool buildings, 52000 SY of parking hardstand and 2100 SF of washroom and showers, were completed.

13. VUNG TAU 4100 MAN CANTONMENT: During this period 4000 SF of chapel/theater, 5980 SF of service club, 32000 SF of billets, 4050 SF of motor pool buildings, 11700 SY of stabilized storage, 6420 SF of headquarters building, and supporting MER showers and MER latrines were constructed.

14. POL PHASE II VUNG TAU: Consists of the design and construction of three 50000 BBL tanks, the supporting 1650 CY of reinforced concrete pads, the manifolding system, the deluge system, the POL jetty for off-loading T-2 tankers including the mooring facilities, and the overall drainage and road system. During this period 550 CY of concrete were placed, 66 miles of #8 rebar was tied, and the construction of the first 50000 BBL welded steel tank was started.

15. VUNG TAU AIRSTRIP REHABILITATION: Consists of the design and rehabilitation of a 4500'x60' Type II IC-130 capable runway to include the replacement of the existing unsatisfactory base course and laying of a 2" layer of hot-mix asphalt on the new base course.

16. MER FOR CH-54 FLYING CRANES: Consists of the design and construction of parking pads, approach ramps, and revetments for three CH-54 Flying Cranes.

17. MER FOR OV-1 MOHAWKS: Consists of the design and construction of parking pads and revetments for 18 OV-1 aircraft.

18. QUARRY OPERATIONS: Consists of the operation of five quarries (two at Vung Tau, one Gia Ray, one at Baria, and one at Phu Quoc) with a weekly production goal of 30000 cubic yards. The quarries are geared to produce the following sizes of product: 3"(-), 1½"(-), 3/4"(-), 3/8"(-) and ¼"(-).

19. BARGE LOADING OPERATIONS: Consists of the loading of barges (300 ton to 700 ton capacity) for transportation of rock to support construction projects in the Mekong Delta. The present shipping goal is one of 1000 CY per day once the required barge tonnage is acquired.

20. HAUL ROAD MAINTENANCE: Consists of the continuous maintenance and upgrading of 5.2 miles of haul road that lead from the quarries to the barge loading facilities.

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21. VUNG TAU PORT FACILITIES: Consists of the design and construction of the port facilities at Vung Tau to include an administrative building of 4000 SF (now under construction), stabilized storage area (partially completed), port service roads (partially completed), security fencing (completed), maintenance facilities (not under construction) and a transit storage shed (completed).

22. REHABILITATION OF ONE 10000BBL POL STORAGE TANK: Consists of the dismantling and reassembly of an existing 10000 BBL POL tank in the Vung Tau POL Farm. The tank will be reassembled on a concrete pad.

Section 2, Part I Observations (Lessons Learned) FOR OFFICIAL USE ONLY

PERSONNEL

1. ITEM: Utilization of Civilian Porsonnel

a. DISCUSSION: Upon arrival in RVN, each line company administered its own civilian personnel program. During the reporting period, a centralized Civilian Personnel Office has been established under the supervision and control of the Battalion Personnel Officer. All administrative actions as well as requests for personnel are coordinated and controlled under his direction.

b. OBSERVATION: Centralization of control has resulted in a reduction in administrative load within the line companies; an increase in effective utilization of civilian labor because of one individual being responsible for assessing battalion wide needs and programming these needs in advance; and an increase in morale among the civilian laborers themselves in that all receive equal treatment and priority in solving problems related to pay, assignment, etc...

2. ITEM: Rotational Hump

a. DISCUSSION: The organization arrived in-country with a severe hump problem in that over 400 enlisted and 23 officers were scheduled to rotate during the month of August. After a mild infusion of personnel with other units, a desire was expressed by many personnel to stay with the unit and accept an extension in tour in RVN. A program was instituted whereby the Battalion Commandor personally interviewed each officer and explained the benefits to be gained by extending his foreign service tour. As a result, 11 officers agreed to extend their tour for periods ranging from one to six months. A similar program was instituted between the company commanders and potential extendees within their companies. As a result, over 100 enlisted personnel agreed to extend.

b. OBSERVATION: A personal approach by unit commanders and battalion commanders to individuals scheduled to be infused to other units to solve the rotational hump can result in a large number of extensions of foreign service tours, thereby obtaining additional usefulness from individuals with experience who would normally rotate at the end of their normal tour, and unit integrity is maintained to a much larger degree by retaining those people who have trained together for a period of time rather than having them replaced by individuals new to the unit.

3. ITEM: 16mm Movies

a. DISCUSSION: Movies are an excellent answer to the problem of off-duty time utilization. Each unit arriving in-country is required to establish a film account, however, due to the shortage of projection

equipment in the area a priority system was established whereby support units such as this battalion are placed as third priority meaning a wait for approximately six months before delivery can be expected.

b. OBSERVATION: It is recommended that support units deploying to this area purchase a 16mm projector with Cinemascope lens prior to overseas movement and that sufficient high usage parts be procurred in order to prevent periods of non-availability due to part shortage.

4. ITEM: Duplicating Equipment

a. DISCUSSION: Due to the amount of reports required in Vietnam and the necessity to reproduce forms locally, a mimeograph machine or any other duplicating equipment is a valuable asset to any unit.

b. OBSERVATIONS: That all battalion sized units have adequate reproduction equipment, not only to produce required material, but also to have a back up should the primary machine become deadlined. When procuring the machine consideration should be given to getting a machine for which replacement parts are readily available. Due to logistic problems, machines utilizing regular paper should be used as special sensitized paper is difficult to obtain in sufficient quantities.

5. ITEM: Need for Trained Radio Operators

a. DISCUSSION: When the battalion entered Vietnam, it settled in a developed area but soon displaced various sized task forces to remote areas. The communications emphasis was shifted from wire to radio. The engineer construction battalion TO&E calls for 6 wireman and only two radio operators.

b. OBSERVATION: All communication personnel should be trained in both wire and radio procedures. By giving all personnel this training prior to deployment a great deal of time will be saved and radios will receive better treatment under experienced hands thereby providing a more effective communications system and a lower deadline rate of radios

OPERATIONS

1. ITEM: Secondary Blasting in Rock Quarries

a. DISCUSSION: Because of the large demand for C-4 explosives by combat units, occasional shortages of the item occur. Since C-4 is most desireable for secondary blasting in quarries a substitute had to be found.

b. OBSERVATION: The best substitute consisted of taking sticks of dynamite apart and using the dynamite in its powder from. The powder can be compressed by hand and mudcapped very easily. Misfires have been greatly reduced from the old method of tying sticks of dynamite together.

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2. ITEM: Use of Headache Ball in Lieu of Secondary Blasting in a Rock Quarry.

a. DISCUSSION: The reduction in size of large boulders in a rock quarry in order that they will pass through a crusher is a constant problem. This problem is magnified where proper initial blasting cannot be accomplished. A 3000 lb headache ball was utilized on a 40-ton crane in order to break up the large boulders.

b. OBSERVATION: After two weeks of operation it was found that in terms of manhours and equipment hours this method was uneconomical. The boulders first required separation in order to permit use of the ball and in most cases several attempts were required to reduce the size of the boulder to the proper size. At times enough boulders were not present and the crane sat idle. Use of explosives still remains the most suitable method of secondary blasting and the crane required for the headache ball could be more efficiently used with a shovel front or some other attachments.

3. ITEM: Rebuilding of Secondary Crusher Rolls

a. DISCUSSION: During crushing operations, especially in hard granite material, it was discovered that the rolls in the standard secondary roll crusher become worn very rapidly requiring frequent replacement.

b. OBSERVATION: Daily resurfacing of the rolls utilizing a stainless steel or hard surfacing rod and welder greatly reduces the need for complete replacement of the crusher rolls and provides more useable crusher time.

4. ITEM: Failure of G-900 Track Drill Replacement Parts Due to Excessive Heat.

a. DISCUSSION: Although many reasons exist for breaking striker bars, couplings, and drill steel, one factor that is instrumental and that can be controlled is heat.

b. OBSERVATION: It was found that the use of "Exposed Gear and Wire Rope Compound" (CW-11 Compound) was most suitable for dissipating the heat from the connections.

5. ITEM: Utilization of D7E Dozer in Rock Quarries

a. DISCUSSION: Extensive use is made of the D7E Dozer in quarry stockpiles by this unit. It was noted that rock which falls over the blade will tend to scar and pock mark the lift cylinder sleeves. When the sleeve enters the lift cylinder in raising the blade, hydraulic fluid tends to leak up.

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b. OBSERVATION: Rock guards 6' x 3' can be welded to the top of the blade to prevent rock spillage on the cylinder sleeve. A curve plate serves a better purpose because it will direct the flow of rock in an upward and forward motion out towards the leading edge of the rock being moved.

6. ITEM: Dual 16S mixers loaded with a frontloader

a. DISCUSSION: Often in a large concrete pour, manpower and quality control are at a premium.

b. OBSERVATION: In order to facilitate large concrete pours, two 16S mixers were used as one unit. They were mounted on a 25 ton M171A2 lowbed trailer. The mixers were mounted (with wheels removed) on each end of the trailer, leaving the center portion free for use as a water storage point and a cement stockpile. A platform was also constructed on the loading end for the 16S mixer to provide additional working space. A 2½ CY front loader was used to load the skip with the appropriate amount of sand and aggregate. The cement was hand loaded from the trailer bed. A triangular shaped bin was fabricated to fit within the 2½ CY bucket. The size was precalculated to suit the mix design in order to provide the correct amounts of sand and aggregate. The bin was made in two sections and can be bolted to the bucket of the frontloader. The sand side of the bucket was fitted with a trap door. When loading aggregate the trap door was opened. The loader operator merely rammed the aggregate stockpile, filling up the aggregate bin, and then the operator proceeded to shake off the excess aggregate. The trap door would then be closed and the operator would ram the sand stockpile, filling up the sand bin. The operator would then shake off the excess sand and deposit his load in the skip, ready to be mixed. The process provides good control on the mix proportions and eliminates the need for valuable manpower used in charging the mixers. (See illustration 1 and 2).

7. ITEM: Placing screeds

a. DISCUSSION: For large concrete pours, this unit found that screed guides could be easily fabricated by using steel rebar (#7 or larger). The rebar was cut in 3 foot sections and an "L" shaped piece of steel was welded on the stake in order to hold the screed board. The stake can be driven into the subgrade to the proper elevation and removed easily after the slab has been screeded. It was also found that it was easier to use the bottom of the screed board as finish grade rather than the top. (See illustration 3)

8. ITEM: Placing pipe under main traffic arteries.

a. DISCUSSION: This unit has had several occasions to place pipe under main traffic arteries for both electrical and water service. In many cases, traffic could not be interrupted. In order to overcome

the problem, a 290M bobtail tractor or D7E dozer was used to push the pipe under the road without any excavation. All that is required is that the pipe is kept absolutely straight and that a very slow but steady force is exerted.

b. OBSERVATION: This is a very rapid and satisfactory method for placing pipe or conduit under heavily traveled roads where excavation is not desireable provided a sub-base is encountered that has no large rocks.

9. ITEM: Need for light lifting capabilities on construction jobs.

a. DISCUSSION: On normal construction jobs a need is always present for lifting relatively light loads or bulky materials. A 5 ton dump truck was fitted with an "A" frame and found quite suitable. The "A" consisted of two 12' lengths of four inch pipe welded at the top with a brace to attach a snatch block. The "A" frame is fastened to pintle hooks on the front bumper. Two eye bolts were placed on the headache board to hold the cables to the "A" frame. A chain is fastened to the "A" frame from the underside of the bumper to keep the frame in place.

b. OBSERVATIONS: This proved to be a very satisfactory method for light lifting jobs and frees a crane or wrecker for other higher priority use.

10. ITEM: Requirement for Roto-Tiller in Vietnam

a. DISCUSSION: Due to the varied soil types and conditions experienced in Vietnam it is often necessary to blend various soils with other materials to obtain a satisfactory material which can be utilized as a sub-base or base course. An example, is in blending Portland Cement with a sandy soil to increase strength characteristics. This unit was never issued its Roto-Tillers as authorized by the TO&E, the result being that blending or mixing jobs must be performed by using a motorized grader which does not give as uniform a mix and requires more time and effort.

b. OBSERVATION: Availability of the Roto-Tiller or like item would materially increase the ability of the unit to utilize locally available materials and transform them into suitable sub-base material by proper blending of additives.

COMMUNICATIONS.

1. ITEM: Utilization of the Antenna RC-292

a. DISCUSSION: Under normal conditions the antenna RC-292 will double the range of the AN/VRC 12 series radios. In an area such as Vietnam this can be extremely important considering the remoteness of many attached units. Humidity and frequent rainfall can cause moisture

to enter the joints of the mast sections and insulation bowl of the antenna causing the mast sections to corrode together and the antenna to develop a short.

b. OBSERVATION: When erecting the antenna equipment, apply a small amount of grease to the threads on the mast section and tape all joints. This will exclude moisture from entering and provide a more reliable system.

LOGISTICS:

1. ITEM: Handling of large amounts of construction materials.

a. DISCUSSION: Due to the large amounts of bulk materials and construction materials which must be handled by the battalion S-4 section, it has been necessary to obtain additional equipment above that authorized by TO&E in order to prevent work stoppage on projects because of the lack of materials being available on site.

b. OBSERVATION: The battalion S-4 needs as a minimum two 5 ton tractors with trailer and two medium fork-lifts of the rough-terrain type in order to stock and move the required materials to insure an orderly and timely flow to the constructing companies.

MAINTENANCE

1. ITEM: Lack of publications for non-standard equipment

a. DISCUSSION: Various items of equipment which are not standard military items have been issued for use such as Euclid Rock Buggys, D9 dozers and 225 ton rock crushers. In each case no publications were available to provide assistance in establishing a working PLL for each item.

b. OBSERVATION: Users should be furnished as a minimum the manufacturers manuals or some other manual in order to identify the parts required above and beyond those furnished in the overpack.

2. ITEM: Storage of Welding Rod

a. DISCUSSION: The humidity in Vietnam is high therefore when welding rod is unpacked it absorbs moisture and becomes unuseable in a short time.

b. OBSERVATION: The unit should obtain an unserviceable refrigator or other suitable container and install two or three 200 watt incandescent bulbs in it. The heat provided will allow storage of rods for an indefinite period.

3. ITEM: Utilization of the EUTALLOY welding process.

a. DISCUSSION: Prior to arrival in RVN, this unit obtained the required equipment to utilize the EUTALLOY welding process. Since arrival the process has been successfully used in repairing compressor ring gears, dozer sprocket gears, shafts of all sizes, conveyor rollers, and numerous other items that are of a low demand type but the lack of which would deadline a end item for large periods. The process is quite simple requiring only a special torch which can be adapted to a standard oxy-acetelyene torch and special formulated powders.

b. OBSERVATION: The EUTALLOY system should be integrated into the Army supply system in order to provide all maintenance sections with the capability of repairing low demand parts that are critical to the operation of end items of heavy equipment.

Section II, Part II, Recommendations

OBSERVATION

A team visited the battalion aid station from the USARV Surgeon's Office to survey the medical service in Vung Tau and ascertain the feasibility of consolidating the medical treatment facilities. This would be done by attaching the medical section of the 36th Engineer Battalion to the 345th General Dispensary.

DISCUSSION

With elements spread out at four distant locations where medical service and aid men are required, attaching the battalion medical section to a dispensary where the headquarters is located would not provide service where service is required. Further the battalion surgeon would not be responsive to the needs of command. Presently the battalion surgeon works at the 345th General Dispensary after sick call is held at the battalion aid station. He also is on night duty with local medical facilities. Holding sick call in the battalion aid station saves countless hours in transporting men to a distant location. Presently the doctor is at the patient's location rather than carrying the patient to the doctor.

RECOMMENDATION

That the medical section of the 36th Engineer Battalion NOT be attached to the local dispensary.

OBSERVATION

The material being handled in a rock quarry results in a High mortality rate of equipment operating. This requires special emphasis on the procurement of repair and replacement parts and for increased authorization in quarry equipment to preclude discontinuance of production when an item of equipment is deadlined, particularly 40 ton cranes with shovel front, rock drills and bulldozers.

DISCUSSION

Loading equipment is critical, therefore when bulldozers and 40 ton cranes are deadlined production stops. TO&E front end loaders are not an acceptable substitute. Rock drills are also critical, the striker bars being the most critical part. The supply system has not been responsive to requisitions.

RECOMMENDATION

With the increased demands for rock to support the LOC program in Vietnam, increased attention must be given to timely supply of repair parts and additional equipment be placed in-country to replace equipment deadlined over 30 days.

RECOMMENDATION

That a representative of the Chicago Pneumatic Drill Company be sent to Vietnam to resolve the repair parts problem and ascertain the reason for the high mortality rate in striker bars. Drills in this battalion have been deadlined for five months for repair parts.

Thomas C. Hunter Jr.

THOMAS C. HUNTER JR
LTC CE
Commanding

3 Incl
1 &2: Dual 16S Mixers w/ frontloaders
3. Screed Guide

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EGF-OP (13 Feb 68) 1st Ind MAJ Dorris/tma/VT 2987
SUBJECT: Operational Report - Lessons Learned (RCS CSFOR - 65) for Quarterly Period Ending 31 January 1968

HQ, 34th Engineer Group (Const), APO 96291, 21 Feb 68

TO: Commanding General, 20th Engr Bde, ATTN: AVBI-OPN, APO 96491

This headquarters concurs with the 36th Engineer Battalion's ORLL subject to the following comments:

a. Section 1, Part I, para 3c: The mission was to construct two LST ramps as stated in Section 1, Part II, para 2.

b. Section 2, Part I, Operations, para 6b: The illustrations attached as inclosures 1 and 2 are artist's concepts and are not drawn to exact detail or scale.

c. Section 2, Part I, Logistics, para 1: Construction Battalions are currently authorized two 10,000 lb RT Fork Lifts. This authorization is considered adequate. RMK equipment which will be allocated to this headquarters will satisfy tractor and trailer requirement.

FOR THE COMMANDER:

W C TOMSEN
Major, CE
Adjutant

Copies furnished:
2 - ACSFOR DA
1 - CO, 36th Engr Bn

AVBI-OS (15 Feb 68) 2nd Ind
SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

DA, Headquarters, 20th Engineer Brigade, APO 96491 29 February 1968

TO: Commanding General, USAECV(P), ATTN: AVCC-P&O, APO 96491

1. Forwarded for your information and action IAW USAECV(P) Reg 1-19, dated 15 April 1967.

2. This headquarters concurs with the ORLL submitted by the 36th Engineer Battalion and comments in the first indorsement as modified by the following comments:

a. Section 2, Part I, p.9, "Need for Trained Radio Operators": Concur that communications personnel should be crosstrained in both wire and radio procedures. Training materials are available.

b. Section 2, Part I, p.10, "Rebuilding of Secondary Crusher Rolls": This method of protecting equipment is not used often enough or widely enough. Hard facing (hard surfacing) should be utilized on all equipment surfaces subject to abrasion, i.e., bulldozer blades, pusher arms, scoop-loader buckets, shovel front buckets, and crusher roll and jaw surfaces. Hard facing, when done properly, is a two stage process. The first stage requires a hardened build-up rod, and the second stage requires a tungsten-carbide surface treatment over the buildup rod. The hard facing should be 1/8" to ¼" thick and placed in a checkerboard or alternating pattern. At present, though known, this method is little used. If instituted as SOP at quarry sites this procedure could result in considerable savings in downtime for maintenance and repair parts. Instruction in this technique would probably also be required.

c. Section 2, Part I, p.12, "Utilization of the Antenna RC-292": Concur. A DA Form 2028 will be submitted by this headquarters recommending a change to the manual. It is noted that graphite would be preferable to grease, since it is a conductor, rather than an insulator.

d. Section 2, Part I, p.13, "Lack of publications for non-standard equipment": If not received through normal channels, they may be acquired by USAMECOM, St. Louis, Mo.

e. Section 2, Part I, p.13, "Utilization of Eutalloy welding process". Concur. Recommend consideration be given to giving this welding capability to the A Co (Equipment and Maintenance Co) of the engineer construction battalion.

AVBI-OS (15 Feb 68) 2nd Ind 29 February 1968
SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Quartsrly Period Ending 31 January 1968

f. Section 2, Part II, p.15, "Medical Section": The recommendation that the battalion medical section not be attached was approved by HQ, USARV.

g. Section 2, Part II, p.15, "Repair Parts": Concur in part. Part of the fault with resupply lies in failure of the using unit to forecast repair parts needs far enough in advance for the supply system to stay up with their needs, particularly with non-standard equipment. Lack of vigorous follow-up action sometimes causes problems in this area too.

h. Section 2, Part II, p.16, "Technical Representative": Do not concur. Lack of striker bars in the repair parts system is a logistical problem. Failure of striker bars is not a result of faulty equipment.

FOR THE COMMANDER:

CECIL D. CLARK
Major, CE
Adjutant

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AVCC-P&C (13 Feb 68) 3rd Ind
SUBJECT: Operational Report-Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 Jan 68

HEADQUARTERS, UNITED STATES ARMY ENGINEER COMMAND
VIETNAM (PROV), APO 96491 15 MAR 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375

The attached OR1, submitted by the 36th Engineer Battalion, has been reviewed by this headquarters and is considered adequate except as follows:

Item concerning Chicago-Pneumatic Rock Drills, Section II, paragraph 2, page 16. Nonconcur. A technical representative from Chicago-Pneumatic could do very little to resolve the repair parts problems and striking bar breakages. A USAMUCOM team has completed an evaluation of the repair parts problems and a lasting solution must come from that agency. Quinton Engineering technicians are now training drill operators which should result in longer useful life of the striking bars.

FOR THE COMMANDER :

John Piatowski 1LT, AGC
for RICHARD B. BIRD
Captain, AGC
Assistant Adjutant General

PROTECTIVE MARKING
CANCELLED 1 Jan 1970

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AVHGC-DST (13 Feb 68) 4th Ind
SUBJECT: Operational Report - Lessons Learned (RCS CSFOR - 65)
for Quarterly Period Ending 31 January 1968

HEADQUARTERS, US ARMY VIETNAM, APO San Francisco 96375 23 MAR 1968

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 January 1968 from Headquarters, 36th Engineer Battalion (WDZPAA) as indorsed.

2. Concur with report as indorsed. Report is considered adequate.

3. A copy of this indorsement will be furnished to the reporting unit through channels.

FOR THE COMMANDER:

Charles A. Byrd

CHARLES A. BYRD
Major, AGC
Assistant Adjutant General

Copies furnished:
HQ 36th Engr Bn
HQ USAECV(P)

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GPOP-DT (13 Feb 68) 5th Ind
SUBJECT: Operational Report of HQ, 36th Engr Bn for Period Ending 31 January 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 12 APR 1968

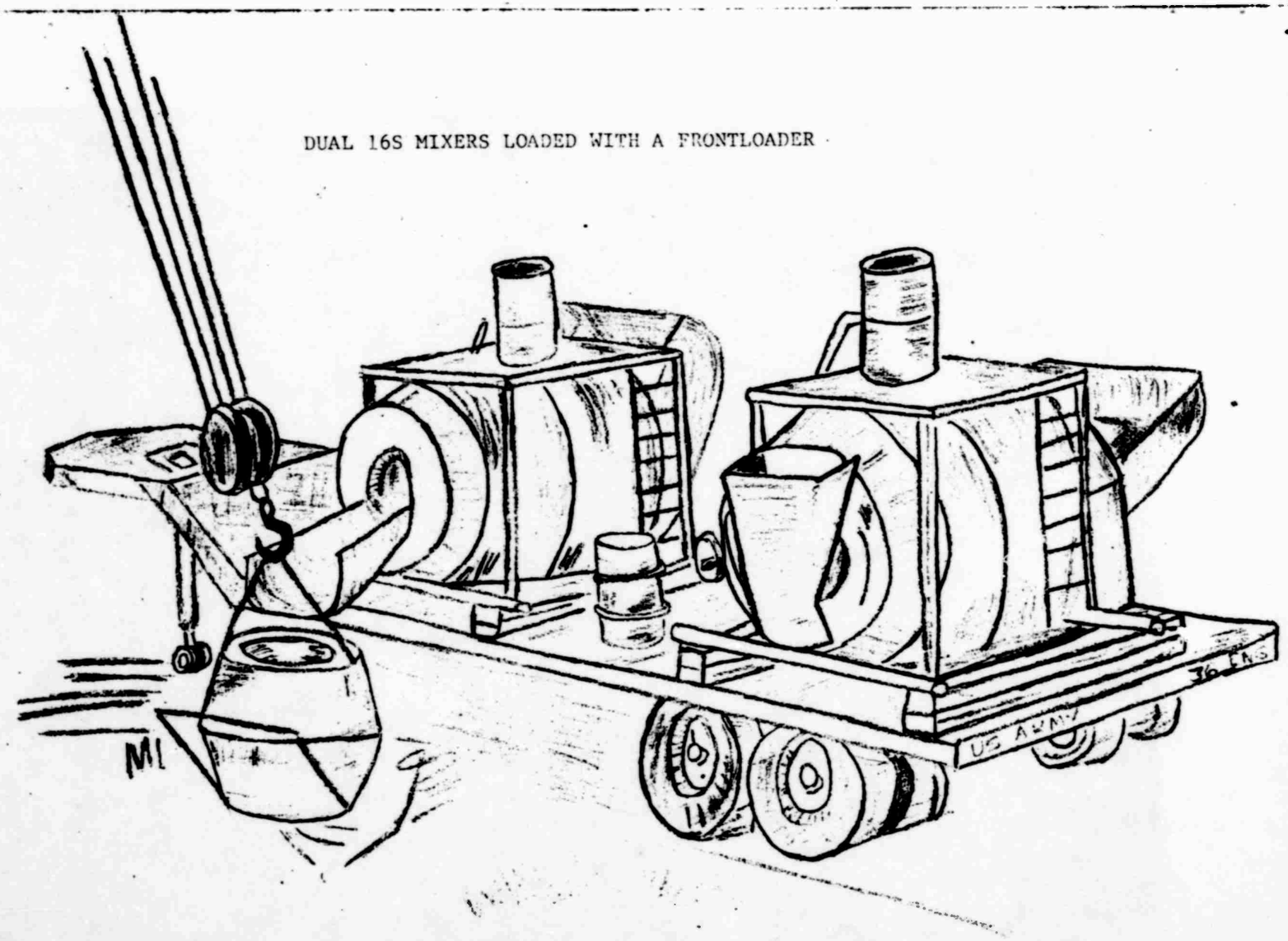
TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

C.L. SHORTT
CPT, AGC
Asst AG

DUAL 16S MIXERS LOADED WITH A FRONTLOADER



Incl 1

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DUAL 16S MIXERS LOADED WITH A FRONTLOADER

Incl 2

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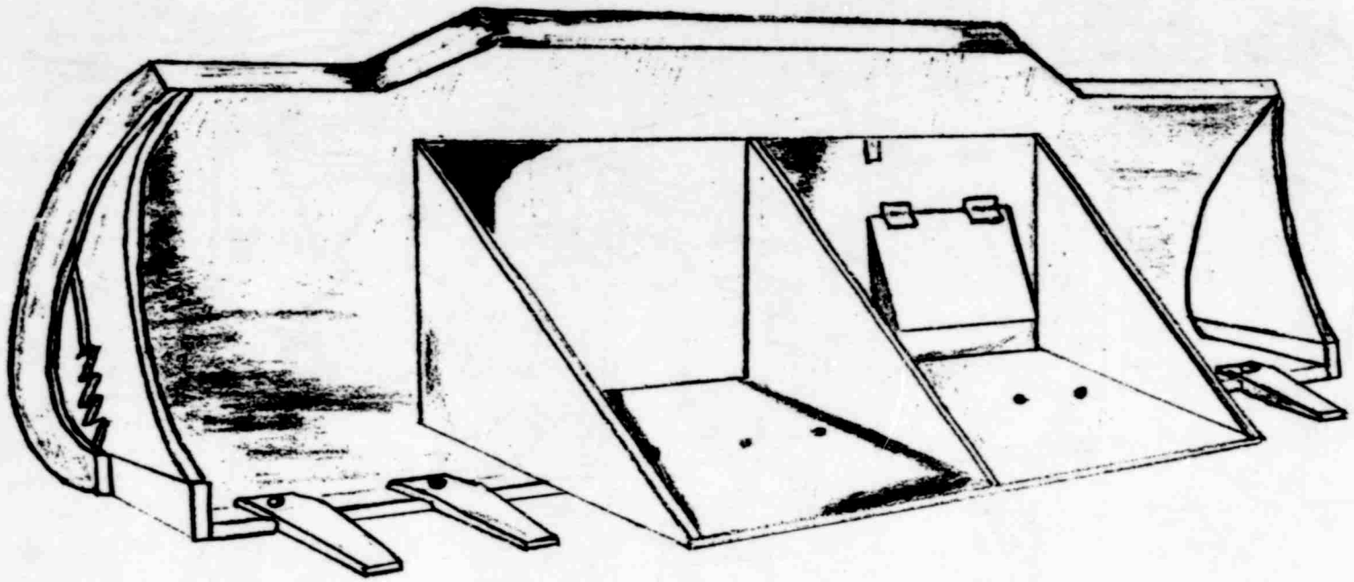

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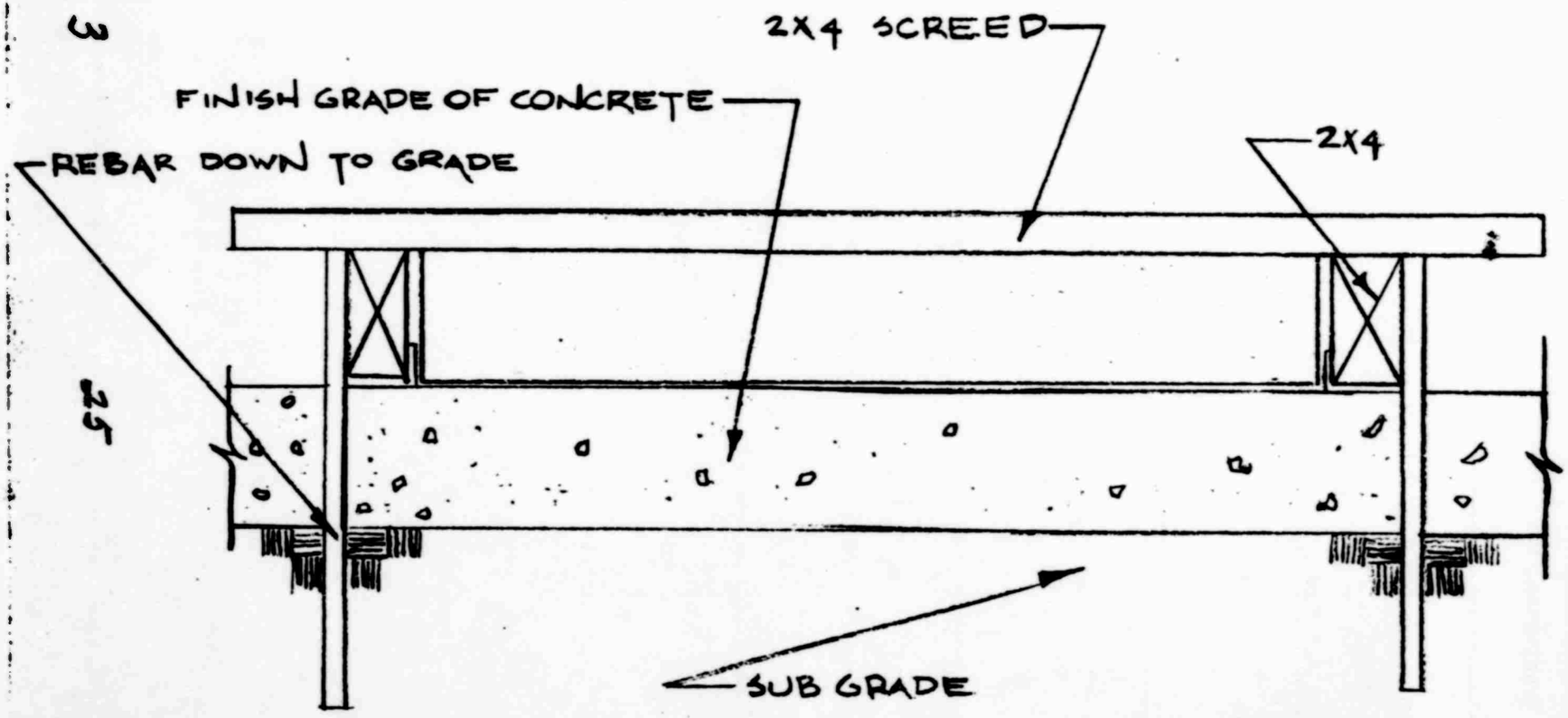
Encl 3

FABRICATION OF SCREED GUIDE



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5. AUTHOR(S) (First name, middle initial, last name)

CO, 36th Engineer Battalion

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